

# Integrin $\alpha 3$ (N-19): sc-6588

## BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane  $\alpha$  and  $\beta$  subunits. The 16  $\alpha$  and 8  $\beta$  subunits heterodimerize to produce more than 20 different receptors. Most integrin receptors bind ligands that are components of the extracellular matrix, including fibronectin, collagen and vitronectin. Certain integrins can also bind to soluble ligands such as fibrinogen, or to counterreceptors on adjacent cells such as the intracellular adhesion molecules (ICAMs), leading to aggregation of cells. Ligands serve to cross-link or cluster integrins by binding to adjacent integrin receptors; both receptor clustering and ligand occupancy are necessary for the activation of integrin-mediated responses. In addition to mediating cell adhesion and cytoskeletal organization, integrins function as signaling receptors. Signals transduced by integrins play a role in many biological processes, including cell growth, differentiation, migration and apoptosis. The integrin  $\alpha 3$  chain, also known as very late (activation) antigen 3 (VLA-3), very common antigen 2 (VCA-2), extracellular matrix receptor 1 (ECMR1), and galactoprotein  $\beta 3$  (GAPB3), undergoes post-translational cleavage in the extracellular domain to yield disulfide-linked light and heavy chains that join with  $\beta 1$  to form an integrin that interacts with many extracellular-matrix proteins.

## CHROMOSOMAL LOCATION

Genetic locus: ITGA3 (human) mapping to 17q21.33; Itga3 (mouse) mapping to 11 D.

## SOURCE

Integrin  $\alpha 3$  (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Integrin  $\alpha 3$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6588 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Integrin  $\alpha 3$  (N-19) is recommended for detection of Integrin  $\alpha 3$  heavy chain of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Integrin  $\alpha 3$  (N-19) is also recommended for detection of Integrin  $\alpha 3$  heavy chain in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Integrin  $\alpha 3$  siRNA (h): sc-35684, Integrin  $\alpha 3$  siRNA (m): sc-37120, Integrin  $\alpha 3$  shRNA Plasmid (h): sc-35684-SH, Integrin  $\alpha 3$  shRNA Plasmid (m): sc-37120-SH, Integrin  $\alpha 3$  shRNA (h) Lentiviral Particles: sc-35684-V and Integrin  $\alpha 3$  shRNA (m) Lentiviral Particles: sc-37120-V.

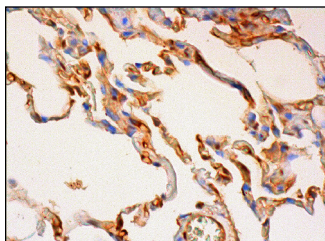
Molecular Weight of Integrin  $\alpha 3$ : 150 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



Integrin  $\alpha 3$  (N-19): sc-6588. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing membrane and cytoplasmic staining of pneumocytes.

## SELECT PRODUCT CITATIONS

- Billy, E., et al. 2001. Specific interference with gene expression induced by long, double-stranded RNA in mouse embryonal teratocarcinoma cell lines. *Proc. Natl. Acad. Sci. USA* 98: 14428-14433.
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- Hawthorne, A.L., et al. 2011. The unusual response of serotonergic neurons after CNS injury: lack of axonal dieback and enhanced sprouting within the inhibitory environment of the glial scar. *J. Neurosci.* 31: 5605-5616.
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- Shin, E.S., et al. 2014. PEDF expression regulates the proangiogenic and proinflammatory phenotype of the lung endothelium. *Am. J. Physiol. Lung Cell. Mol. Physiol.* 306: L620-L634.
- Katic, J., et al. 2014. Interaction of the cell adhesion molecule CHL1 with vitronectin, integrins, and the plasminogen activator inhibitor-2 promotes CHL1-induced neurite outgrowth and neuronal migration. *J. Neurosci.* 34: 14606-14623.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

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Try **Integrin  $\alpha 3$  (A-3): sc-374242** or **Integrin  $\alpha 3$  (E-8): sc-393298**, our highly recommended monoclonal alternatives to Integrin  $\alpha 3$  (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Integrin  $\alpha 3$  (A-3): sc-374242**.